


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|   |   |   |                      |
|---|---|---|----------------------|
| Applicant's or agent's file reference<br><b>P85122PC00MR</b>  | <b>FOR FURTHER ACTION</b>                                       |   | See Form PCT/PEA/416 |
| International application No.<br><b>PCT/GB2004/002251</b>   | International filing date (day/month/year)<br><b>27.05.2004</b> | Priority date (day/month/year)<br><b>04.06.2003</b>                             |                      |
| International Patent Classification (IPC) or national classification and IPC<br><b>B60M1/18</b>   |   |   |                      |
| Applicant<br><b>MULTICLIP COMPANY LIMITED</b>   |   |   |                      |
| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.<br>2. This REPORT consists of a total of 4 sheets, including this cover sheet.<br>3. This report is also accompanied by ANNEXES, comprising:<br>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 1 sheets, as follows:<br><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).<br><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.<br>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |   |   |                      |
| 4. This report contains indications relating to the following items:<br><input checked="" type="checkbox"/> Box No. I      Basis of the opinion<br><input type="checkbox"/> Box No. II     Priority<br><input type="checkbox"/> Box No. III    Non-establishment of opinion with regard to novelty, inventive step and industrial applicability<br><input type="checkbox"/> Box No. IV    Lack of unity of invention<br><input checked="" type="checkbox"/> Box No. V     Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement<br><input type="checkbox"/> Box No. VI    Certain documents cited<br><input type="checkbox"/> Box No. VII   Certain defects in the international application<br><input type="checkbox"/> Box No. VIII   Certain observations on the international application   |   |   |                      |
| Date of submission of the demand<br><br><b>07.02.2005</b>   |   | Date of completion of this report<br><br><b>04.04.2005</b>                      |                      |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office - P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk - Pays Bas<br>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl<br>Fax: +31 70 340 - 3016   |   | Authorized Officer<br><br><b>Bolder, G</b><br><br>Telephone No. +31 70 340-3636 |                      |



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/GB2004/002251

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-7 as originally filed

**Claims, Numbers**

12-22 as originally filed

1-11 received on 07.02.2005 with letter of 03.02.2005

**Drawings, Sheets**

1/8-8/8 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/GB2004/002251

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |      |
|-------------------------------|-------------|------|
| Novelty (N)                   | Yes: Claims | 1-22 |
|                               | No: Claims  |      |
| Inventive step (IS)           | Yes: Claims | 1-22 |
|                               | No: Claims  |      |
| Industrial applicability (IA) | Yes: Claims | 1-22 |
|                               | No: Claims  |      |

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following document:

D1: GB-A-1 378 751 (BRITISH INSULATED CALLENDER'S CABLES LIMITED) 27  
December 1974 (1974-12-27)

1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and shows:

A neutral section for use with an overhead railway conductor line disposed between the ends of said conductor line comprising an insulator to isolate the ends of said conductor line from each other. This insulator is composed of several parts.

The subject-matter of claim 1 differs from this known D1 in that the insulator is a single, integral body.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

2 The problem to be solved by the present invention may be regarded as:  
how to make an insulator which is cheap to produce and easy to install.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

An insulator made as a single, integral body is relatively cheap and easy to install. This solution is not suggested in the prior art nor is it obvious.

3 Claims 2-22 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

NEUTRAL CLAIM

PART FILED IN RESPONSE

TO WI CASE 20-1-01

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CLAIMS

1. A neutral section (1) for use with an overhead railway conductor line, which neutral section (1) is disposed between the ends of said conductor line when in use, the neutral section (1) comprising an insulator (10) having a single, integral body to isolate the ends of said conductor line from each other, wherein the profile of the neutral section (1) is designed such that, when the neutral section (1) is in use, its neutral axis is aligned closely with the neutral axis of the conductors on its either side and the height of said insulator (10) is chosen so that the stiffness and the dynamic mass of the neutral section (1) closely match those of the conductors on its either side in both the vertical and horizontal planes.
2. A neutral section as claimed in claim 1, wherein the insulator (10) is formed from a glass-fibre reinforced epoxy composite.
3. A neutral section as claimed in claim 2, wherein the glass-fibre reinforced epoxy composite contains a 45% glass fraction.
4. A neutral section as claimed in any preceding claim, further comprising connection members (2) for connecting the neutral section (1) to each end of said conductor line.
5. A neutral section as claimed in claim 4, wherein each connection member (2) is a U-shaped member with two legs (3, 4), said two legs (3, 4) protruding outwardly from the neutral section (1).
6. A neutral section as claimed in claim 5, wherein one of said two legs (4) is used for connecting the neutral section (1) to one end of said conductor line.
7. A neutral section as claimed in claim 5 or 6, wherein the other of said two legs (3) can serve as an arcing horn.
8. A neutral section as claimed in any one of claims 4 to 7, wherein pegs (5) are provided on the outer surface of each connection member (2).
9. A neutral section as claimed in any preceding claim, further comprising a low-friction member for providing a continuous running surface between the neutral section (1) and each end of said conductor line, said low-friction member being disposed on the underside of the neutral section (1) and lying parallel to the ends of the conductor line when the neutral section (1) is in use.
10. A neutral section as claimed in claim 9, wherein said low friction member is made of a low friction material.
11. A neutral section as claimed in claim 9 or 10, wherein glass beads are incorporated in the low-friction member.